

SEQUENCE LISTING

<110> Friddle, Carl Johan
Hilbun, Erin

<120> Novel Human Proteases and Polynucleotides Encoding the Same

<130> LEX-0219-USA

<150> US 60/225,852

<151> 2000-08-16

<160> 5

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 1476

<212> DNA

<213> homo sapiens

<400> 1

atgaagcccc	gcgcgcgcgc	atggcggggc	ttggcggcgc	tgtggatgct	gttggcgcgag	60
gtggcccgag	aggcacctgc	gtgcgccatg	ggaccgcgag	cggcagcgcc	tgggagcccg	120
agcgtcccg	gtccctctcc	acccgcggag	cggccgggct	ggatggaaaa	gggcgaatat	180
gacctggtct	ctgcctacga	ggttgaccac	agggcgcatg	acgtgtccca	tgaaatcatg	240
caccatcagc	ggcggagaag	agcagtggcc	gtgtccgagg	ttgagtctct	tcaccttcgg	300
ctgaaaggct	ccaggcacga	cttccacgtg	gatctgagga	cttcagcag	cctagtggct	360
cctggcttta	ttgtgcagac	gttgggaaag	acaggcacta	agtctgtgca	gactttaccg	420
ccagaggact	tctgtttcta	tcaaggctct	ttgcgatcac	acagaaaactc	ctcagtggcc	480
ctttcaacct	gccaaaggctt	gtcaggcatg	atacgaacag	aagaggcaga	ttacttctta	540
aggccacttc	cttcacacct	ctcatggaaa	ctcggcagag	ctgcccagg	cagctcgcca	600
tcccacgtac	tgtacaagag	atccacagag	ccccatgctc	ctggggccag	tgaggctctg	660
gtgacctcaa	ggacatggga	gctggcacat	caacccctgc	acagcagcga	ccttcgcctg	720
ggactgccac	aaaagcagca	tttctgtgga	agacgcaaga	aatacatgcc	ccagcctccc	780
aaggaagacc	tcttcatctt	gccagatgag	tataagtctt	gcttacggca	taagcgctct	840
cttctgaggt	cccatagaaa	tgaagaactg	aacgtggaga	ccttggtggt	ggtcgacaaa	900
aagatgatgc	aaaaccatgg	ccatgaaaat	atcaccacct	acgtgctcac	gatactcaac	960
atggtatctg	ctttattcaa	agatggaaca	ataggaggaa	acatcaacat	tgcaattgta	1020
ggtctgattc	ttctagaaga	tgaacagcca	ggactggtga	taagtcacca	cgcagaccac	1080
accttaagta	gcttctgcc	gtggcagctc	ggattgatgg	ggaagatgg	gactcgtcat	1140
gaccacgcca	tcttactgac	tggctctggt	atatgttctt	ggaagaatga	gccctgtgac	1200
actttgggat	ttgcacccat	aagtgggaatg	tgtagtaaat	atcgcagctg	cacgattaat	1260
gaagatacag	gtcttggact	ggccttcacc	attgcccattg	agtctggaca	caactttggc	1320
atgattcatg	atggagaagg	gaacatgtgt	aaaaagtccg	agggcaacat	catgtcccct	1380
acattggcag	gacgcaatgg	agtcttctcc	tggtcaccct	gcagccgcca	gtatctacac	1440
aaatttctaa	gatcagtga	aatgccagct	ctctga			1476

<210> 2

<211> 491

<212> PRT

<213> homo sapiens

<400> 2

Met	Lys	Pro	Arg	Ala	Arg	Gly	Trp	Arg	Gly	Leu	Ala	Ala	Leu	Trp	Met
1				5				10					15		
Leu	Leu	Ala	Gln	Val	Ala	Glu	Gln	Ala	Pro	Ala	Cys	Ala	Met	Gly	Pro
		20						25			30				
Ala	Ala	Ala	Ala	Pro	Gly	Ser	Pro	Ser	Val	Pro	Arg	Pro	Pro	Pro	Pro
		35				40					45				
Ala	Glu	Arg	Pro	Gly	Trp	Met	Glu	Lys	Gly	Glu	Tyr	Asp	Leu	Val	Ser
50						55					60				

Ala	Tyr	Glu	Val	Asp	His	Arg	Gly	Asp	Tyr	Val	Ser	His	Glu	Ile	Met
65					70					75					80
His	His	Gln	Arg	Arg	Arg	Arg	Ala	Val	Ala	Val	Ser	Glu	Val	Glu	Ser
				85					90					95	
Leu	His	Leu	Arg	Leu	Lys	Gly	Ser	Arg	His	Asp	Phe	His	Val	Asp	Leu
			100					105					110		
Arg	Thr	Ser	Ser	Ser	Leu	Val	Ala	Pro	Gly	Phe	Ile	Val	Gln	Thr	Leu
		115					120					125			
Gly	Lys	Thr	Gly	Thr	Lys	Ser	Val	Gln	Thr	Leu	Pro	Pro	Glu	Asp	Phe
	130					135					140				
Cys	Phe	Tyr	Gln	Gly	Ser	Leu	Arg	Ser	His	Arg	Asn	Ser	Ser	Val	Ala
145					150					155					160
Leu	Ser	Thr	Cys	Gln	Gly	Leu	Ser	Gly	Met	Ile	Arg	Thr	Glu	Glu	Ala
			165						170					175	
Asp	Tyr	Phe	Leu	Arg	Pro	Leu	Pro	Ser	His	Leu	Ser	Trp	Lys	Leu	Gly
			180					185					190		
Arg	Ala	Ala	Gln	Gly	Ser	Ser	Pro	Ser	His	Val	Leu	Tyr	Lys	Arg	Ser
		195					200					205			
Thr	Glu	Pro	His	Ala	Pro	Gly	Ala	Ser	Glu	Val	Leu	Val	Thr	Ser	Arg
	210					215						220			
Thr	Trp	Glu	Leu	Ala	His	Gln	Pro	Leu	His	Ser	Ser	Asp	Leu	Arg	Leu
225					230					235					
Gly	Leu	Pro	Gln	Lys	Gln	His	Phe	Cys	Gly	Arg	Arg	Lys	Lys	Tyr	Met
			245					250						255	
Pro	Gln	Pro	Pro	Lys	Glu	Asp	Leu	Phe	Ile	Leu	Pro	Asp	Glu	Tyr	Lys
			260					265					270		
Ser	Cys	Leu	Arg	His	Lys	Arg	Ser	Leu	Leu	Arg	Ser	His	Arg	Asn	Glu
		275					280					285			
Glu	Leu	Asn	Val	Glu	Thr	Leu	Val	Val	Val	Asp	Lys	Lys	Met	Met	Gln
	290					295					300				
Asn	His	Gly	His	Glu	Asn	Ile	Thr	Thr	Tyr	Val	Leu	Thr	Ile	Leu	Asn
305					310					315					320
Met	Val	Ser	Ala	Leu	Phe	Lys	Asp	Gly	Thr	Ile	Gly	Gly	Asn	Ile	Asn
			325					330						335	
Ile	Ala	Ile	Val	Gly	Leu	Ile	Leu	Leu	Glu	Asp	Glu	Gln	Pro	Gly	Leu
			340					345					350		
Val	Ile	Ser	His	His	Ala	Asp	His	Thr	Leu	Ser	Ser	Phe	Cys	Gln	Trp
		355					360					365			
Gln	Ser	Gly	Leu	Met	Gly	Lys	Asp	Gly	Thr	Arg	His	Asp	His	Ala	Ile
	370					375					380				
Leu	Leu	Thr	Gly	Leu	Asp	Ile	Cys	Ser	Trp	Lys	Asn	Glu	Pro	Cys	Asp
385					390					395					400
Thr	Leu	Gly	Phe	Ala	Pro	Ile	Ser	Gly	Met	Cys	Ser	Lys	Tyr	Arg	Ser
			405					410						415	
Cys	Thr	Ile	Asn	Glu	Asp	Thr	Gly	Leu	Gly	Leu	Ala	Phe	Thr	Ile	Ala
			420					425					430		
His	Glu	Ser	Gly	His	Asn	Phe	Gly	Met	Ile	His	Asp	Gly	Glu	Gly	Asn
		435					440					445			
Met	Cys	Lys	Lys	Ser	Glu	Gly	Asn	Ile	Met	Ser	Pro	Thr	Leu	Ala	Gly
	450					455					460				
Arg	Asn	Gly	Val	Phe	Ser	Trp	Ser	Pro	Cys	Ser	Arg	Gln	Tyr	Leu	His
465					470					475					480
Lys	Phe	Leu	Arg	Ser	Val	Lys	Met	Pro	Ala	Leu					
				485				490							

<210> 3
 <211> 3675
 <212> DNA
 <213> homo sapiens

<400> 3
 atgaagcccc ggcgcgcgcg atggcggggc ttggcggcgc tgtggatgct gctggcgcag
 gtggccgagc aggcacctgc gtgcgccatg ggaccgcgag cggcagcgcc tgggagcccc

60
 120

agcgtcccg	gtcctcctcc	acccgcgag	cgccggggct	ggatggaaaa	gggcgaatat	180
gacctggtct	ctgcctacga	ggttgaccac	aggggcgatt	acgtgtccca	tgaaatcatg	240
caccatcagc	ggcggagaag	agcagtggcc	gtgtccgagg	ttgagtctct	tcaccttcgg	300
ctgaaaggct	ccaggcacga	cttcacagtg	gatctgagga	cttcacagcag	cctagtggct	360
cctggcttta	ttgtgcagac	gttgggaaag	acaggcacta	agtctgtgca	gactttaccg	420
ccagaggact	tctgtttcta	tcaaggctct	ttgcgatcac	acagaaactc	ctcagtggcc	480
ctttcaacct	gccaaggctt	gtcaggcatg	atacgaacag	aagaggcaga	ttacttccta	540
aggccacttc	cttcacacct	ctcatggaaa	ctcggcagag	ctgcccagg	cagctcgcca	600
tcccacgtac	tgtacaagag	atccacagag	ccccatgctc	ctggggccag	tgagggtcctg	660
gtgacctcaa	ggacatggga	gctggcacat	caacccctgc	acagcagcga	ccttcgcctg	720
ggactgccac	aaaagcagca	tttctgtgga	agacgcaaga	aatacatgcc	ccagcctccc	780
aaggaagacc	tcttcatctt	gccagatgag	tataagtctt	gcttacggca	taägcgctct	840
cttctgaggt	cccatagaaa	tgaagaactg	aacgtggaga	ccttggtggt	ggtcgacaaa	900
aagatgatgc	aaaaccatgg	ccatgaaaat	atcaccacct	acgtgctcac	gatactcaac	960
atggtatctg	ctttattcaa	agatggaaca	ataggaggaa	acatcaacat	tgcaattgta	1020
ggtctgattc	ttctagaaga	tgaacagcca	ggactggtga	taagtacca	cgcagaccac	1080
accttaagta	gcttctgcca	gtggcagctc	ggattgatgg	ggaagatgg	gactcgtcat	1140
gaccacgcca	tcttactgac	tggtctggat	atatgttctt	ggaagaatga	gccctgtgac	1200
actttgggat	ttgcacctat	aagtggaaatg	tgtagtaaat	atcgagctg	cacgattaat	1260
gaagatacag	gtcttggact	ggccttcacc	attgcccatg	agtctggaca	caactttggc	1320
atgattcatg	atggagaagg	gaacatgtgt	aaaaagtcct	agggcaacat	catgtcccct	1380
acattggcag	gacgcaatgg	agtcttctcc	tggtcaccct	gcagccgcca	gtatctacac	1440
aaatttctaa	gcaccgctca	agctatctgc	cttgctgata	agccaaagcc	tgtgaaggaa	1500
tacaagtatc	ctgagaaatt	gccaggagaa	ttatatgatg	caaacacaca	gtgcaagtgg	1560
cagtttcggg	agaaaagcca	gctctgcata	ctggacttta	aaaaggacat	ctgtaaagcc	1620
ctgtggtgcc	atcgtattgg	aaggaaatgt	gagactaaat	ttatgccagc	agcagaaggc	1680
acaatttgtg	ggcatgacat	gtggtgccgg	ggaggacagt	gtgtgaaata	tggtgatgaa	1740
ggccccaagc	ccacctatgg	ccactggtcg	gactggtcct	ccttggtcccc	atgctccagg	1800
acctgcgagg	ggggagtatc	tcataggagt	cgctctgca	ccaaccccaa	gccatcgcat	1860
ggagggaagt	tctgtgaggg	ctccactcgc	actctgaagc	tctgcaacag	tcagaaatgt	1920
ccccgggaca	gtgttgactt	ccgtgctgct	cagtgtgccg	agcacaacag	cagacgattc	1980
agaggggcgg	actacaagtg	gaagccttac	actcaagtag	aagatcagga	cttatgcaaa	2040
ctctactgta	tcgcagaagg	atttgatttc	ttcttttctt	tgtcaaataa	agtcaaagat	2100
gggactccat	gctcggagga	tagccgtaat	gtttgtatag	atgggatatg	tgagagagtt	2160
ggatgtgaca	atgtcccttg	atctgatgct	gttgaagacg	tctgtggggg	gtgtaacggg	2220
aataactcag	cctgcacgat	tcacaggggt	ctctacacca	agcaccacca	caccaacag	2280
tattatcaca	tggtcaccat	tccttctgga	gcccggagta	tccgcatcta	tgaaatgaac	2340
gtctctacct	cctacatttc	tgtgcgcaat	gccctcagaa	ggtactacct	gaatgggcac	2400
tggaccgtgg	actggccccg	ccggtacaaa	ttttcgggca	ctactttcga	ctacagacgg	2460
tcctataatg	agcccgagaa	cttaatcgct	actggaccaa	ccaacgagac	actgatttgt	2520
gagctgctgt	ttcaggggaag	gaacccgggt	gttgccctgg	aatactccat	gcctcgcttg	2580
gggaccgaga	agcagccccc	tgcccagccc	agctacactt	gggccatcgt	gcgctctgag	2640
tgctccgtgt	cctgcggagg	gggacagatg	accgtgagag	agggctgcta	cagagacctg	2700
aagtttcaag	taaatatgtc	cttctgcaat	cccaagacac	gacctgtcac	ggggctggtg	2760
ccttgcaaaag	tatctgcctg	tcctcccagc	tggtccgtgg	ggaactggag	tgccctgcagt	2820
cggacgtgtg	gcgggggtgc	ccagagccgc	cccgtgcagt	gcacacggcg	ggtgcactat	2880
gactcggagc	cagtcccggc	cagcctgtgc	cctcagcctg	ctccctccag	caggcaggcc	2940
tgcaactctc	agagctgccc	acctgcatgg	agcgcggggc	cctgggcaga	gtgctcacac	3000
acctgtggga	aggggtggag	gaagcgggca	gtggcctgta	agagcaccaa	ccccctggcc	3060
agagcgcagc	tgctgcccga	cgctgtctgc	acctccgagc	ccaagcccag	gatgcatgaa	3120
gcctgtctgc	ttcagcgctg	ccacaagccc	aagaagctgc	agtggctggg	gtccgcctgg	3180
tcccagtgct	ctgtgacatg	tgaagagga	acacagaaaa	gattcttaaa	atgtgtgaa	3240
aagtatgttt	ctggaaaagta	tcgagagctg	gcctcaaaaga	agtgtcaca	tttgccgaag	3300
cccagcctgg	agctggaacg	tgccctgcgc	ccgcttccat	gccccaggga	ccccccattt	3360
gctgctgagg	gaccctcgag	gggcagctgg	tttgccctcac	cctgggtctca	gtgcacggcc	3420
agctgtgggg	gaggcggttca	gacgaggtcc	gtgcagtgcc	tggtgggggg	ccggccggcc	3480
tcaggctgcc	tcctgcacca	gaagccttcg	gcctccctgg	cctgcaacac	tcacttctgc	3540
cccattgcag	agaagaaaga	tgccttctgc	aaagactact	tccactgggtg	ctacctggtg	3600
ccccagcacg	ggatgtgcag	ccacaagttc	tacggcaagc	agtgtgcaa	gacttgctct	3660
aagtccaact	tgtga					3675

<210> 4

<211> 1224

<212> PRT
 <213> homo sapiens

<400> 4

Met	Lys	Pro	Arg	Ala	Arg	Gly	Trp	Arg	Gly	Leu	Ala	Ala	Leu	Trp	Met
1				5					10					15	
Leu	Leu	Ala	Gln	Val	Ala	Glu	Gln	Ala	Pro	Ala	Cys	Ala	Met	Gly	Pro
		20					25						30		
Ala	Ala	Ala	Ala	Pro	Gly	Ser	Pro	Ser	Val	Pro	Arg	Pro	Pro	Pro	Pro
		35				40					45				
Ala	Glu	Arg	Pro	Gly	Trp	Met	Glu	Lys	Gly	Glu	Tyr	Asp	Leu	Val	Ser
	50					55					60				
Ala	Tyr	Glu	Val	Asp	His	Arg	Gly	Asp	Tyr	Val	Ser	His	Glu	Ile	Met
	65				70					75					80
His	His	Gln	Arg	Arg	Arg	Arg	Ala	Val	Ala	Val	Ser	Glu	Val	Glu	Ser
			85						90					95	
Leu	His	Leu	Arg	Leu	Lys	Gly	Ser	Arg	His	Asp	Phe	His	Val	Asp	Leu
			100					105					110		
Arg	Thr	Ser	Ser	Ser	Leu	Val	Ala	Pro	Gly	Phe	Ile	Val	Gln	Thr	Leu
		115					120						125		
Gly	Lys	Thr	Gly	Thr	Lys	Ser	Val	Gln	Thr	Leu	Pro	Pro	Glu	Asp	Phe
	130					135					140				
Cys	Phe	Tyr	Gln	Gly	Ser	Leu	Arg	Ser	His	Arg	Asn	Ser	Ser	Val	Ala
	145				150					155					160
Leu	Ser	Thr	Cys	Gln	Gly	Leu	Ser	Gly	Met	Ile	Arg	Thr	Glu	Glu	Ala
			165						170					175	
Asp	Tyr	Phe	Leu	Arg	Pro	Leu	Pro	Ser	His	Leu	Ser	Trp	Lys	Leu	Gly
		180						185					190		
Arg	Ala	Ala	Gln	Gly	Ser	Ser	Pro	Ser	His	Val	Leu	Tyr	Lys	Arg	Ser
		195					200					205			
Thr	Glu	Pro	His	Ala	Pro	Gly	Ala	Ser	Glu	Val	Leu	Val	Thr	Ser	Arg
	210					215					220				
Thr	Trp	Glu	Leu	Ala	His	Gln	Pro	Leu	His	Ser	Ser	Asp	Leu	Arg	Leu
	225				230					235					240
Gly	Leu	Pro	Gln	Lys	Gln	His	Phe	Cys	Gly	Arg	Arg	Lys	Lys	Tyr	Met
			245						250					255	
Pro	Gln	Pro	Pro	Lys	Glu	Asp	Leu	Phe	Ile	Leu	Pro	Asp	Glu	Tyr	Lys
		260						265					270		
Ser	Cys	Leu	Arg	His	Lys	Arg	Ser	Leu	Leu	Arg	Ser	His	Arg	Asn	Glu
		275					280					285			
Glu	Leu	Asn	Val	Glu	Thr	Leu	Val	Val	Val	Asp	Lys	Lys	Met	Met	Gln
		290				295					300				
Asn	His	Gly	His	Glu	Asn	Ile	Thr	Thr	Tyr	Val	Leu	Thr	Ile	Leu	Asn
					310					315					320
Met	Val	Ser	Ala	Leu	Phe	Lys	Asp	Gly	Thr	Ile	Gly	Gly	Asn	Ile	Asn
			325						330					335	
Ile	Ala	Ile	Val	Gly	Leu	Ile	Leu	Leu	Glu	Asp	Glu	Gln	Pro	Gly	Leu
			340					345					350		
Val	Ile	Ser	His	His	Ala	Asp	His	Thr	Leu	Ser	Ser	Phe	Cys	Gln	Trp
		355					360					365			
Gln	Ser	Gly	Leu	Met	Gly	Lys	Asp	Gly	Thr	Arg	His	Asp	His	Ala	Ile
	370					375				380					
Leu	Leu	Thr	Gly	Leu	Asp	Ile	Cys	Ser	Trp	Lys	Asn	Glu	Pro	Cys	Asp
					390					395					400
Thr	Leu	Gly	Phe	Ala	Pro	Ile	Ser	Gly	Met	Cys	Ser	Lys	Tyr	Arg	Ser
			405						410					415	
Cys	Thr	Ile	Asn	Glu	Asp	Thr	Gly	Leu	Gly	Leu	Ala	Phe	Thr	Ile	Ala
			420					425					430		
His	Glu	Ser	Gly	His	Asn	Phe	Gly	Met	Ile	His	Asp	Gly	Glu	Gly	Asn
			435				440					445			
Met	Cys	Lys	Lys	Ser	Glu	Gly	Asn	Ile	Met	Ser	Pro	Thr	Leu	Ala	Gly
	450					455					460				
Arg	Asn	Gly	Val	Phe	Ser	Trp	Ser	Pro	Cys	Ser	Arg	Gln	Tyr	Leu	His

465	Lys	Phe	Leu	Ser	Thr	Ala	Gln	Ala	Ile	Cys	Leu	Ala	Asp	Gln	Pro	Lys	480
					485					490							495
Pro	Val	Lys	Glu	Tyr	Lys	Tyr	Pro	Glu	Lys	Leu	Pro	Gly	Glu	Leu	Tyr		
			500					505						510			
Asp	Ala	Asn	Thr	Gln	Cys	Lys	Trp	Gln	Phe	Gly	Glu	Lys	Ala	Lys	Leu		
		515					520						525				
Cys	Met	Leu	Asp	Phe	Lys	Lys	Asp	Ile	Cys	Lys	Ala	Leu	Trp	Cys	His		
	530					535					540						
Arg	Ile	Gly	Arg	Lys	Cys	Glu	Thr	Lys	Phe	Met	Pro	Ala	Ala	Glu	Gly		
545					550				555						560		
Thr	Ile	Cys	Gly	His	Asp	Met	Trp	Cys	Arg	Gly	Gly	Gln	Cys	Val	Lys		
				565					570					575			
Tyr	Gly	Asp	Glu	Gly	Pro	Lys	Pro	Thr	His	Gly	His	Trp	Ser	Asp	Trp		
			580					585						590			
Ser	Ser	Trp	Ser	Pro	Cys	Ser	Arg	Thr	Cys	Gly	Gly	Gly	Val	Ser	His		
		595					600					605					
Arg	Ser	Arg	Leu	Cys	Thr	Asn	Pro	Lys	Pro	Ser	His	Gly	Gly	Lys	Phe		
	610					615					620						
Cys	Glu	Gly	Ser	Thr	Arg	Thr	Leu	Lys	Leu	Cys	Asn	Ser	Gln	Lys	Cys		
625					630					635					640		
Pro	Arg	Asp	Ser	Val	Asp	Phe	Arg	Ala	Ala	Gln	Cys	Ala	Glu	His	Asn		
				645					650					655			
Ser	Arg	Arg	Phe	Arg	Gly	Arg	His	Tyr	Lys	Trp	Lys	Pro	Tyr	Thr	Gln		
			660					665						670			
Val	Glu	Asp	Gln	Asp	Leu	Cys	Lys	Leu	Tyr	Cys	Ile	Ala	Glu	Gly	Phe		
		675					680					685					
Asp	Phe	Phe	Phe	Ser	Leu	Ser	Asn	Lys	Val	Lys	Asp	Gly	Thr	Pro	Cys		
	690					695					700						
Ser	Glu	Asp	Ser	Arg	Asn	Val	Cys	Ile	Asp	Gly	Ile	Cys	Glu	Arg	Val		
705					710					715					720		
Gly	Cys	Asp	Asn	Val	Leu	Gly	Ser	Asp	Ala	Val	Glu	Asp	Val	Cys	Gly		
			725						730					735			
Val	Cys	Asn	Gly	Asn	Asn	Ser	Ala	Cys	Thr	Ile	His	Arg	Gly	Leu	Tyr		
			740					745					750				
Thr	Lys	His	His	His	Thr	Asn	Gln	Tyr	Tyr	His	Met	Val	Thr	Ile	Pro		
		755					760						765				
Ser	Gly	Ala	Arg	Ser	Ile	Arg	Ile	Tyr	Glu	Met	Asn	Val	Ser	Thr	Ser		
		770				775					780						
Tyr	Ile	Ser	Val	Arg	Asn	Ala	Leu	Arg	Arg	Tyr	Tyr	Leu	Asn	Gly	His		
785					790					795					800		
Trp	Thr	Val	Asp	Trp	Pro	Gly	Arg	Tyr	Lys	Phe	Ser	Gly	Thr	Thr	Phe		
				805					810						815		
Asp	Tyr	Arg	Arg	Ser	Tyr	Asn	Glu	Pro	Glu	Asn	Leu	Ile	Ala	Thr	Gly		
				820				825					830				
Pro	Thr	Asn	Glu	Thr	Leu	Ile	Val	Glu	Leu	Leu	Phe	Gln	Gly	Arg	Asn		
		835					840					845					
Pro	Gly	Val	Ala	Trp	Glu	Tyr	Ser	Met	Pro	Arg	Leu	Gly	Thr	Glu	Lys		
		850				855					860						
Gln	Pro	Pro	Ala	Gln	Pro	Ser	Tyr	Thr	Trp	Ala	Ile	Val	Arg	Ser	Glu		
865					870					875					880		
Cys	Ser	Val	Ser	Cys	Gly	Gly	Gly	Gln	Met	Thr	Val	Arg	Glu	Gly	Cys		
				885					890					895			
Tyr	Arg	Asp	Leu	Lys	Phe	Gln	Val	Asn	Met	Ser	Phe	Cys	Asn	Pro	Lys		
		900						905					910				
Thr	Arg	Pro	Val	Thr	Gly	Leu	Val	Pro	Cys	Lys	Val	Ser	Ala	Cys	Pro		
		915					920					925					
Pro	Ser	Trp	Ser	Val	Gly	Asn	Trp	Ser	Ala	Cys	Ser	Arg	Thr	Cys	Gly		
		930				935					940						
Gly	Gly	Ala	Gln	Ser	Arg	Pro	Val	Gln	Cys	Thr	Arg	Arg	Val	His	Tyr		
945					950					955					960		
Asp	Ser	Glu	Pro	Val	Pro	Ala	Ser	Leu	Cys	Pro	Gln	Pro	Ala	Pro	Ser		
				965					970					975			

Ser Arg Gln Ala Cys Asn Ser Gln Ser Cys Pro Pro Ala Trp Ser Ala
 980 985 990
 Gly Pro Trp Ala Glu Cys Ser His Thr Cys Gly Lys Gly Trp Arg Lys
 995 1000 1005
 Arg Ala Val Ala Cys Lys Ser Thr Asn Pro Ser Ala Arg Ala Gln Leu
 1010 1015 1020
 Leu Pro Asp Ala Val Cys Thr Ser Glu Pro Lys Pro Arg Met His Glu
 1025 1030 1035 1040
 Ala Cys Leu Leu Gln Arg Cys His Lys Pro Lys Lys Leu Gln Trp Leu
 1045 1050 1055
 Val Ser Ala Trp Ser Gln Cys Ser Val Thr Cys Glu Arg Gly Thr Gln
 1060 1065 1070
 Lys Arg Phe Leu Lys Cys Ala Glu Lys Tyr Val Ser Gly Lys Tyr Arg
 1075 1080 1085
 Glu Leu Ala Ser Lys Lys Cys Ser His Leu Pro Lys Pro Ser Leu Glu
 1090 1095 1100
 Leu Glu Arg Ala Cys Ala Pro Leu Pro Cys Pro Arg His Pro Pro Phe
 1105 1110 1115 1120
 Ala Ala Ala Gly Pro Ser Arg Gly Ser Trp Phe Ala Ser Pro Trp Ser
 1125 1130 1135
 Gln Cys Thr Ala Ser Cys Gly Gly Gly Val Gln Thr Arg Ser Val Gln
 1140 1145 1150
 Cys Leu Ala Gly Gly Arg Pro Ala Ser Gly Cys Leu Leu His Gln Lys
 1155 1160 1165
 Pro Ser Ala Ser Leu Ala Cys Asn Thr His Phe Cys Pro Ile Ala Glu
 1170 1175 1180
 Lys Lys Asp Ala Phe Cys Lys Asp Tyr Phe His Trp Cys Tyr Leu Val
 1185 1190 1195 1200
 Pro Gln His Gly Met Cys Ser His Lys Phe Tyr Gly Lys Gln Cys Cys
 1205 1210 1215
 Lys Thr Cys Ser Lys Ser Asn Leu
 1220

<210> 5
 <211> 4042
 <212> DNA
 <213> homo sapiens

<400> 5
 ctttcccgcg ctctgcttgg gtcgggtcct ccctgcccgc tcgcacgctg ccggccgggg 60
 accctccggt ggcccctagc ccctcggagc gctcctggat gaagccccgc gcgcgcggat 120
 ggccggggctt ggccggcgctg tggatgctgc tggcgcaggt ggccgagcag gcacctgcgt 180
 gcgccatggg acccgcagcg gcagcgcctg ggagcccagc cgtcccgcgt cctcctccac 240
 ccgcggagcg gccgggctgg atggaaaagg gcgaatatga cctggctctc gcctacgagg 300
 ttgaccacag gggcgattac gtgtcccatg aaatcatgca ccatcagcgg cggagaagag 360
 cagtggccgt gtccgaggtt gagtctcttc accttcggct gaaaggctcc aggcacgact 420
 tccacgtgga tctgaggact tccagcagcc tagtggctcc tggctttatt gtgcagacgt 480
 tgggaaagac aggcactaag tctgtgcaga ctttaccgcc agaggacttc tgtttctatc 540
 aaggctcttt gcgatcacac agaaactcct cagtggccct ttcaacctgc caaggcttgt 600
 caggcatgat acgaacagaa gaggcagatt acttcctaag gccacttctt tcacacctct 660
 catggaaact cggcagagct gcccaaggca gctcgccatc ccacgtactg tacaagagat 720
 ccacagagcc ccattgctcct ggggccagtg aggtcctggt gacctcaagg acatgggagc 780
 tggcacatca acccctgcac agcagcgacc ttcgcctggg actgccacaa aagcagcatt 840
 tctgtggaag acgcaagaaa tacatgcccc agcctcccaa ggaagacctc ttcattcttc 900
 cagatgagta taagtcttgc ttacggcata agcgtctctt tctgaggtcc catagaaatg 960
 aagaactgaa cgtggagacc ttggtggtgg tcgacaaaaa gatgatgcaa aacctggcc 1020
 atgaaaatat caccacctac gtgctcacga tactcaacat ggtatctgct ttattcaaa 1080
 atggaacaat aggaggaaac atcaacattg caattgtagg tctgattctt ctagaagatg 1140
 aacagccagg actggtgata agtcaccacg cagaccacac cttaagtagc ttctgccagt 1200
 ggcagtctgg attgatgggg aaagatggga ctcgctatga ccacgccatc ttactgactg 1260
 gtctggatat atgttcctgg aagaatgagc cctgtgacac tttgggattt gcaccataa 1320
 gtggaatgtg tagtaaatat cgcagctgca cgattaatga agatacaggt cttggactgg 1380
 ctttcacat tgcccatgag tctggacaca actttggcat gattcatgat ggagaaggga 1440

acatgtgtaa	aaagtccgag	ggcaacatca	tgtcccctac	attggcagga	cgcaatggag	1500
tcttctctcg	gtcaccctgc	agccgccagt	atctacacaa	atttctaagc	accgctcaag	1560
ctatctgcct	tgctgatcag	ccaaagcctg	tgaaggata	caagtatcct	gagaaattgc	1620
caggagaatt	atatgatgca	aacacacagt	gcaagtggca	gttcggagag	aaagccaagc	1680
tctgcatgct	ggactttaaa	aaggacatct	gtaaagccct	gtggtgccat	cgtattggaa	1740
ggaaatgtga	gactaaattt	atgccagcag	cagaaggcac	aatttgtggg	catgacatgt	1800
gggtgccgggg	aggacagtgt	gtgaaatatg	gtgatgaagg	ccccaagccc	acccatggcc	1860
actggtcgga	ctggctctct	tggcccccat	gctccaggac	ctgcggaggg	ggagtatctc	1920
ataggagtcg	cctctgcacc	aaccccaagc	catcgcatgg	agggaaagttc	tgtgagggtc	1980
ccactcgcac	tctgaagctc	tgcaacagtc	agaaatgtcc	ccgggacagt	gttgacttcc	2040
gtgctgctca	gtgtgccgag	cacaacagca	gacgattcag	agggcggcac	tacaagtggg	2100
agccttacac	tcaagtagaa	gatcaggact	tatgcaaact	ctactgtatc	gcagaaggat	2160
ttgattttct	cttttctttg	tcaaataaag	tcaaagatgg	gactccatgc	tcggaggata	2220
gccgtaatgt	ttgtatagat	gggatagtgt	agagagtggg	atgtgacaat	gtccttggtg	2280
ctgatgctgt	tgaagcgtc	tgtggggtgt	gtaacgggaa	taactcagcc	tgacagattc	2340
acaggggtct	ctacaccaag	caccaccaca	ccaaccagta	ttatcacatg	gtcaccattc	2400
cttctggagc	ccggagtatc	cgcactctatg	aaatgaacgt	ctctacctcc	tacatttctg	2460
tgcgcaatgc	cctcagaagg	tactacctga	atgggcactg	gaccgtggac	tggcccggcc	2520
ggtacaaatt	ttcgggcact	actttcgact	acagacggtc	ctataatgag	cccagagaact	2580
taatcgctac	tggaccaacc	aacgagacac	tgattgtgga	gctgctgttt	cagggagagg	2640
acccgggtgt	tgcctgggaa	tactccatgc	ctcgcttggg	gaccgagaag	cagccccctg	2700
cccagcccag	ctacacttgg	gccatcgtgc	gctctgagtg	ctcctgttcc	tgcggagggg	2760
gacagatgac	cgtgagagag	ggctgctaca	gagacctgaa	gtttcaagta	aatatgtcct	2820
tctgcaatcc	caagacacga	cctgtcacgg	ggctgggtgcc	ttgcaaagta	tctgcctgtc	2880
ctcccagctg	gtccgtgggg	aactggagtg	cctgcagtcg	gacgtgtggc	gggggtgccc	2940
agagccgccc	cgtgcagtgc	acacggcggg	tgcactatga	ctcggagcca	gtcccggcca	3000
gcctgtgccc	tcagcctgct	ccctccagca	ggcaggcctg	caactctcag	agctgcccac	3060
ctgcatggag	cgccgggccc	tgggcagagt	gctcacacac	ctgtgggaag	gggtggagga	3120
agcgggcagt	ggcctgtaag	agcaccaacc	cctcggccag	agcgcagctg	ctgcccgcag	3180
ctgtctgcac	ctccgagccc	aagcccagga	tgcatagaag	ctgtctgctt	cagcgtgtcc	3240
acaagcccaa	gaagctgcag	tggctgggtgt	ccgcctggtc	ccagtgtctt	gtgacatgtg	3300
aaagaggaac	acagaaaaga	ttcttaaaat	gtgctgaaaa	gtatgtttct	ggaaagtatc	3360
gagagctggc	ctcaagaag	tgctcacatt	tgccgaagcc	cagcctggag	ctggaacgtg	3420
cctgcgcccc	gcttccatgc	cccaggcacc	ccccatttgc	tgctgcggga	ccctcgaggg	3480
gcagctgggt	tgcctcacc	tggctctcagt	gcacggccag	ctgtggggga	ggcgttcaga	3540
cgaggtccgt	gcagtgcctg	gctggggggc	ggccggcctc	aggctgcctc	ctgcaccaga	3600
agccttcggc	ctccctggcc	tgcaacactc	acttctgccc	cattgcagag	aagaaagatg	3660
ccttctgcaa	agactacttc	cactggtgct	acctggtacc	ccagcacggg	atgtgcagcc	3720
acaagttcta	cggcaagcag	tgctgcaaga	cttgctctaa	gtccaacttg	tgagttggga	3780
ccgctctccg	tagcagagaa	agtgcctgcg	tggcacagaa	atttcccaca	aatgagctgt	3840
gcaatctacg	tcggaatata	tccaaggaag	agcaaagcca	aaagaagaaa	accgtgttag	3900
gctctttgac	caggagtgtg	tgtatgtgtt	tcactgtgag	cctgggtgca	gacctgtgtc	3960
cccatgcaca	cagtgtctcc	tgtcaggctg	aaatgtggca	ccctggcaga	cagagctgtg	4020
gctcgtgagg	cagaaggcag	gc				4042